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September 29, 2004

VIA FACSIMILE

To: Examiners Milan Kapadia and Joseph Thomas Facsimile No.: (703) 872-9306
Group Art Unit Nos. 2143 and 3626
U.S.P.T.O.

From: Frederick E. Cooperrider Facsimile No.: (703) 761-2375 (76)

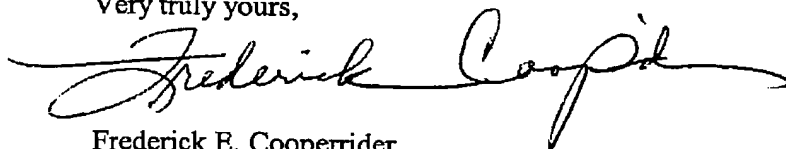
Re: Enclosed Appellants' Reply Brief on Appeal
U.S. Patent Application Serial No. 09/302,154
Attorney Docket No.: YOR919990214US1
Our Reference: YOR.387

Dear Examiners Kapadia and Thomas:

Enclosed is Appellants' Reply Brief on Appeal responsive to Examiner's Answer, Paper No. 19, dated August 19, 2004, which should place the above-referenced case in condition for allowance.

Thank you in advance for your consideration on this case.

Very truly yours,



Frederick E. Cooperrider
Registration No. 36,769

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Pednault, E.

Serial No.: 09/302,154

Group Art Unit: 2143/3626

Filed: April 29, 1999

Examiner: Kapadia, M./ Thomas, J.

For: A METHOD FOR CONSTRUCTING SEGMENTATION-BASED PREDICTIVE
MODELS FROM DATA THAT IS PARTICULARLY WELL-SUITED FOR
INSURANCE RISK OR PROFITABILITY MODELING PURPOSES

APPELLANTS' REPLY BRIEF ON APPEAL

Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

Appellant herein respectfully replies to the Examiner's Answer, Paper No. 19, dated August 19, 2004. This reply addresses the concern identified by the Examiner that Appellant's Appeal Brief failed to provide a rationale why the claim grouping is considered patentably distinct.

This reply further responds to the position of the Examiner, as stated in the Examiner's Answer, including the first time during prosecution that the Examiner has stated a rationale for considering terminology in Apte as equivalent to terms of art in the claims.

Finally, this reply summarizes the deficiencies of the rejection currently of record, given the explanation, allegations, and comments in the Examiner's Answer.

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GROUPING OF THE CLAIMS

As grouped in Appellant's Appeal Brief, independent claim 1 and dependent claims 5-8 and 11 stand or fall together, independent claim 2 and dependent claims 9 and 12 stand or fall together, independent claim 3 and dependent claims 10 and 13 stand or fall together, independent claim 4 stands or falls by itself, independent claims 14 and 16 and dependent claims 15, 17, and 18 stand or fall together, and independent claim 19 and dependent claim 20 stand or fall together.

The patentable distinction of this grouping is based on the description in the respective independent claims.

That is, as explained at lines 19-25 of page 14 of the specification, the definition of the present invention of claim 1 is significant because it: "... enables complex constraints to be placed on the statistical estimation errors that can be tolerated with respect to various aspects of the predictive models that are constructed."

Each of independent claims 2 and 3 differently describe the aspects of the present invention that provide the additional benefit of (e.g., lines 2-4 of page 17 of the specification): "... while at the same time preventing premature termination of the segment refinement process caused by poor choices made during the construction of the segments."

As summarized at lines 9-14 of page 18, the significance of the aspect of the present invention of independent claim 4 is that "... it can be applied in conjunction with any of the various statistical models employed by actuaries in order to construct highly predictive risk models that take into account the statistical properties of insurance data associated with specific insurance products." The significance of independent claim 14 is that an apparatus is defined that executes the described functions and independent claim 16 specifically defines that the method is automatically executed on a computer. Contrary to the Examiner's allegations on the record, these two claims specifically define in plain wording that the present invention is executed by a computer, thereby precluding the interpretation that the user-assisted method of Apte can be considered as teaching these definitions of the present invention.

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That is, claim 14 specifically defines a calculator that generates the plurality of segments. Claim 16 specifically describes the process as being automatically generated on the computer. The technique in Apte in which segments are selectively eliminated by the user does not generate segments, let alone generate them in accordance with statistical constraints. The generation of segments in Apte occurs only during the data mining operation.

However, as explained below, Appellant submits that independent claims 1, 2, and 3 are also clearly patentable over Apte.

The aspect of the present invention described in claims 19 and 20 address specific applications in a commercial setting of the computerized tool described in the specification. It is noted that claim 19 also includes the wording "automatically generating", thereby precluding interpretation that the user-assisted method of Apte anticipates this claim.

APPELLANT'S REPLY TO THE EXAMINER'S RESPONSE TO
ARGUMENT ON PAGES 16-24

(A) Beginning on page 16 and continuing through page 17, the Examiner continues to maintain that "... Apte failed to expressly teach a computer readable medium". Appellant submits that this statement by the Examiner demonstrates a lack of understanding of computer technology. That is, Apte very clearly implements a computerized tool, as is very clear from even the first line of the Abstract. Appellant submits that, to one of ordinary skill in the art of computer programming, this description means that inherently there is a computer medium containing the instructions that control the computer during the execution of the tool discussed in Apte.

Appellant again points out that the evaluation currently of record is defective in attempting to modify Apte by Simoudis when Apte already inherently has the characteristic upon which the Examiner declares as the rationale to modify the primary reference. That is, because Apte already incorporates a computer readable medium (otherwise the computer in Apte would not function), there is no reason to consider Simoudis as a secondary reference.

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Moreover, as pointed out repeatedly by Appellant, the method of Simoudis is executed automatically on the computer by the software without user assistance. This automatic execution contrasts with the user-assisted method in Apte. Therefore, in attempting to modify the user-assisted technique of Apte with the autonomous execution of Simoudis, the Examiner would be improperly modifying the principle of operation in Apte that relies upon the user inputs.

(B) On pages 18-20, the Examiner continues to maintain that the claim wording fails to preclude manual intervention.

In reply, Appellant point to the following claim wording:

For claims 1-3: "A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for constructing segmentation-based models that satisfy constraints on the statistical properties of the segments, the method comprising...."

For claim 4: "A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for constructing segmentation-based models of insurance risks, the method comprising"

That is, the preamble of claims 1-4 clearly define that the subsequent claim limitations describe what is included in the program of instructions executable by the machine. As such, Appellant respectfully submits that, contrary to the Examiner's allegation, these words do not read on a mental process nor on a user inputs.

For claim 14: "An apparatus comprising ... and (2) a calculator to generate, ... wherein the generation of said plurality of segment models comprises an optimization process comprising: a) generating alternate training data segments and associated segment models, ... and b) selecting a final plurality of segment models and associated segments from among the alternates evaluated that satisfy said statistical constraints."

In other words, claim 14 clearly defines that it is the calculator of an apparatus that executes the process of generating alternate training data segments.

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For claim 16: "A computerized method ..., the method comprising: ... and based on said training data, automatically generating on said computer, a plurality of segment models, that together comprise an overall model,...."

For claim 19: "... the method executed by said machine comprising: and (2) based on said training data, automatically generating, on said computer, a plurality of segment models, that together comprise an overall model...."

In other words, claims 16 and 19 clearly require that the method be executed automatically by the computer.

Appellant submits that perhaps part of the problem in the Examiner's interpretation is that human language has not yet evolved verb forms that differentiate between action executed by a human versus action executed by a computer or other machine. However, Appellant submits that the independent claims, even as originally written, contain appropriate language that clearly define the action as being executed by the machine rather than the user.

Contrary to the Examiner's allegation, Appellant respectfully submits that the claim language does expressly define the action as occurring on a machine, as highlighted above.

Appellant further submits that the Examiner's presumed suggestion that claim language should be adapted to each Examiner's individual preferences to expressly define exclusions does nothing but add confusion to the intended declaration of what the software program actually does. That is, a partial listing of exclusions in a claim, as required by one Examiner, leads to the legal issue of the status of non-listed exclusions.

Appellant submits that, by stating expressly the steps executed by the software, the claims currently of record inherently preclude the interpretation that the step is being executed through human interaction.

Relative to the Examiner's response in the final paragraph on page 19, in which the Examiner alleges "... even though user intervention occurs in Apte, the computer system is the process that eventually executes all the recited steps electronically", it is pointed out that this statement is inherently contradictory.

That is, on the one hand the Examiner concedes that Apte requires user intervention. In the same sentence, the Examiner then alleges that the computer does these steps. This

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contradiction in logic is somewhat distressing, particularly when the Examiner repeats this basic contradiction: "... Apte teaches that all the claimed steps being done by software, albeit some of them being executed after manual intervention."

The Examiner attempts to clarify: "... it is the computer system that electronically implements the final selection made by the user." However, this paraphrasing of Apte is not what has been claimed, since the independent claims require that the generation of segments be based upon a determination whether the segment meets a statistical constraint.

(C) On pages 20-22, as best understood, the Examiner confirms that he does indeed intend for "statistical constraint" to be satisfied by the "actual premium".

The Examiner states:

"The cited passage by the Examiner states that 'the end user can now examine each of these segments and their estimated pure premiums. For example, if the product's actual premium is \$350, and segments that fall within the eligibility list and whose estimated pure premiums are significantly higher than this figure are candidates for exclusion from the product.' (Apte; col. 4, lines 38-33). As such, the cited passage reaffirms that estimated pure premiums of segments are evaluated against an actual premium (i.e., statistical constraint) to select a final plurality of segments. As indicated by Appellant, the Examiner maintained that the cited passage of Apte clearly suggested the 'statistical constraint' having a value of \$350 and was not predicted but entered by the user as the desired quarterly premium (Apte; col. 4, lines 9-16 and 28-33)....

... Furthermore, as pointed out by Appellant on pages 8 and 13 of Appellant's brief, the Examiner has indicated throughout the record the Examiner has interpreted the variable that has a value of \$350 as the "statistical constraint." It is respectfully noted, that in Apte the only variable having such a value is the "actual premium". " (emphasis by Appellant)

Appellant respectfully replies that the above statement indicates some basic confusion by the Examiner. First, it is noted that the actual premium of \$350 is not used in Apte as a variable and it is not "... entered by the user as the desired quarterly premium."

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Rather, the actual premium is the amount actually being charged for the product being analyzed. In Apte, it has a single exemplary value (e.g., \$350). Accordingly, it is not a variable. It is a datum already associated with the product under analysis. Moreover, by reason of being a single number associated with the product under analysis, it is not statistical in any way.

The cited passage does nothing more than instruct the user to compare this single value (e.g., actual premium) with the estimated pure premium for each segment. If the user considers that the estimated pure premium is "significantly higher" than the amount actually charged for the product, then that segment can be selectively eliminated. This selective removal of a segment from the model is an entirely different concept from that of the plain meaning of the claim language that the segment be evaluated during its generation to determine whether it satisfies a statistical constraint. This aspect of the present invention provides a "closed loop" for the generation of the segments.

Second, the above-recited description by the Examiner ("*... that estimated pure premiums of segments are evaluated against an actual premium (i.e., statistical constraint) to select a final plurality of segments ...*") is not what the plain meaning of the claim language requires, since the statistical constraint is clearly applied during the generation of the segments, not for purpose of eliminating the segment from the model, as is done in Apte.

(D) On pages 22-23, the Examiner addresses Appellant's request that the Examiner provide a reasonable reference supporting his position for "statistical constraint". It is noted that the Examiner has finally (e.g., as part of the Examiner's Answer), in the entire prosecution history, felt obliged to defend that any term in Apte can reasonably be considered as a "statistical constraint".

The Examiner first alleges that the specification fails to define this term.

In response, Appellant submits that "statistical constraint" is a term of art in the actuarial art that addresses the concern discussed on pages 1 and 2 of identifying whether homogenous risk groups are "actuarially credible". This point is expressly highlighted in lines 2-5 of page 3: "*In the case of insurance risk modeling, the segments would correspond to risk*

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groups and the constraints would correspond to criteria used by actuaries to assess actuarial credibility."

Thus, Appellant submits that the specification does indeed define this concept.

Moreover, contrary to the Examiner's allegation, specific examples for "statistical constraints" are clearly provided in the specification between line 30 of page 93 and line 6 of page 94 (e.g., Equation 15 for insurance risk or profitability modeling using joint Poisson/log-normal models, and Equation 64 for weighted least-squares models).

Thus, the Examiner is not free to consider that "statistical constraint" refers to any parameter that happens to be used as a selection constraint, as long as the parameter can summarily be declared as having some type of statistical characteristic.

Second, it is again noted that the Examiner's own wording ("*... it is respectfully submitted that Apte's actual premium that is used to evaluate the generated segments and restrict which segments are included in the final plurality of segments, is clearly a constraint.*") is not what the plain meaning of the claim language requires.

That is, the statistical constraint is required to be used in the generation process of the segments. Apte does not have a corresponding segment generation step that uses statistical constraints to guide the process of generating the segments.

The generation of the segments in Apte is clearly described at lines 23-27 of column 4: "*When the data mining rules are applied to this subset, the rules will break up the eligibility subset into as many segments as there are rules*"

Thus, in Apte, the segments are equivalent to the rules extracted by the data mining process. These segments are not changed during the interaction with the user. Moreover, there clearly is no statistical constraint applied to this generation of segments, in which segments are defined in accordance with the rules extracted during data mining.

Third, it is noted that the Examiner clearly does nothing except make a conclusory declaration with his statement in the first full paragraph on page 23: "... As explained above and incorporated herein, Apte's actual premium has a value of \$350 in the cited passage and therefore clearly is statistical in nature."

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Appellant respectfully submits that the single exemplary value of \$350 does not in any way provide a basis to summarily declare that an insurance actual premium is somehow "statistical in nature".

Moreover, as explained above, the term "statistical constraint" is a term of art in the actuarial art, as explained in the specification. An insurance policy actual premium is the price being paid for the policy. It is clearly not a "criterion used by actuaries to assess actuarial credibility" for either the policy or for population segments covered by the policy. The exemplary segment generation process of the present invention, described beginning at line 10 of page 89, preferably starts with a single segment (e.g., see lines 9-12 of page 90). This initial segment is then systematically broken down into two or more segments in each generation cycle, as described beginning at line 14 of page 90. As explained beginning at line 24 of page 93, remaining segments are tested to determine whether they satisfy the desired statistical constraints for segments (e.g., Equation 15 for joint Poisson/log-normal models and Equation 64 for weighted least-squares models).

In contrast, Apte does not have a corresponding segment generation process. Indeed, as clearly defined at lines 23-29 of column 4, Apte has a single set of segments for any specified subset, and this single set of segments is determined by applying the rules extracted from the data mining process. There is no segment generation process in Apte other than the fixed set of segments determined from these rules.

The user merely takes these fixed segments and decides whether the difference between the actual premium and the estimated pure premium for that segment is "significantly high" to eliminate that segment. However, this segment elimination process is not a segment generation process, let alone a process based on determining whether the segment satisfies a statistical constraint that is a criterion used by actuaries to assess actuarial credibility.

That is, unlike the fixed segment set in Apte, the present invention automatically generates a set of segments in a closed loop technique that is based on actuarial credibility. The user-assisted model in Apte has a fixed set of segments, and these segments that have not been evaluated for actuarial credibility. The selection by the user to eliminate specific

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segments does not in any way provide any more actuarial credibility either to any of the segments remaining or to the resultant modified model.

(E) In addition to there being no suggestion in Apte of any generation of segments except the initial set generated by data mining, there is also no suggestion of constructing a segmentation-based model except by the data mining process. The Examiner cannot ignore the plain meaning of this claim language. Therefore, the Examiner's attempt to read steps in the scenario analysis process of Apte against the claims is invalid because the claims are restricted to "method steps for constructing segmentation-based models."

The present invention is directed toward a data mining process for constructing segmentation-based models. The method steps in Apte's scenario analysis process, by contrast, do not produce segmentation-based models, nor do they modify segmentation-based models. The outcome of the scenario analysis in Apte is an adjusted set of eligibility criteria, not a segmentation-based model. Steps in the scenario analysis process cannot be read against the present claims because the claims are restricted to "method steps for constructing segmentation-based models" and scenario analysis does not comprise any steps for constructing segmentation-based models.

The data mining process discussed by Apte that precedes scenario analysis does produce segmentation-based models, but only by standard means. As discussed in Apte, column 1, lines 55-60, the data mining process analyzes historical data to extract "... *rules that describe policy holders with homogeneous claim frequency and severity characteristics, and then further uses these rule sets to classify policy holders into distinct risk groups, each with its own set of characteristics, including pure premium.*"

Sets of such rules constitute segmentation-based models. As the specification states on page 1, line 30, to page 2, line 5:

"A traditional method used by actuaries to construct risk models involves first segmenting an overall population of policyholders into a collection of risk groups based on a set of factors, such as age, gender, driving distance to place of employment, etc. The risk parameters of each group (i.e., segment) are then estimated from historical policy and claims

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data."

The specification goes on to say on page 2, line 28, to page 3, line 5:

"Our method overcomes the limitations inherent in manual methods for constructing segmentation-based predictive models by combining automated search over possible segmentations with constraints on the statistical estimation errors that can be tolerated in the predictive models that are constructed for each segment. In the case of insurance risk modeling, the segments would correspond to risk groups and the constraints would correspond to criteria used by actuaries to assess actuarial credibility."

Hence, the rules in Apte that are produced by data mining correspond to segmentation-based models in the Appellant's specification. As pointed out above, the present claims are limited to processes for constructing segmentation-based models.

However, the scenario analysis process of Apte that the Examiner is attempting to read against Appellant's claims neither constructs nor modifies segmentation-based models. Instead, the computerized aspect of Apte's process produces a report, and the manual aspect of the process uses the contents of that report to produce an adjusted set of eligibility criteria.

The inputs to the computerized aspect of the scenario analysis process are a database to be analyzed, a segmentation-based model produced by data mining, and eligibility criteria for the insurance product that is to be analyzed:

"Using the scenario analysis screen, the user will specify a database to analyze, a data mining model to be used as the base, and a product/population identifier. A product identifier is essentially a user created rule set, that could either represent an existing product, or a new product under consideration." (Apte, column 8, lines 61-66)

The user created rule set defines the eligibility criteria:

"A user of the system is allowed to define to the solution a book of business (either existing or proposed) by typing in the eligibility criteria for the book as a set of "If" conditions." (Apte, column 3, lines 28-32)

In the context of Apte, a book of business is synonymous with an insurance product for all intents and purposes:

"Essentially, associated with each book of business is an insurance product which

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covers a (potentially vast) group of policy holders that have subscribed to the product."
(Apte, column 1, lines 21-23)

The output of the computerized aspect of scenario analysis is a report:

"The scenario analysis result will first report on the gross statistics on how the product rule set covered the database, and within this coverage, using the base model, will be a detailed segmentation report that breaks down the coverage into individual segments, listed by the segments' coverage, percentage coverage, severity estimate, frequency estimate, pure premium, loss ration, and other entries that may be of interest. In addition, the screen will permit the table to be sorted by any of these columns. This "what-if" style scenario analysis will assist the users to identify problems and opportunities with existing as well as new P&C products." (Apte, column 9, lines 29-39)

The user can then examine the contents of the report and interactively adjust/fine-tune the eligibility criteria in order to achieve desired profitability goals:

"The user of the solution can now begin interactively experimenting with fine tuning the eligibility criteria for the product, until the segments that are dragging the overall loss down are satisfactorily removed. This "what-if" scenario analysis can be potentially performed on a firm's existing insurance products, as well as new insurance products that may be under consideration." (Apte, column 4, lines 33-36)

Segmentation-based models are neither generated nor modified by either the computerized aspect nor the manual aspect of scenario analysis. Segmentation-based models are generated only by the data mining process that occurs before the scenario analysis process is executed.

The computerized aspect of scenario analysis applies the segmentation-based model that is produced by data mining to generate a report. However, the computerized aspect of scenario analysis does not in any way modify this segmentation-based model.

Nor does the manual aspect of scenario analysis modify the segmentation-based model that is provided as input to scenario analysis. The only thing that is modified by the manual aspect of scenario analysis are the "If" rules that comprise the eligibility criteria, and it is the user, not the computer, that generates and modifies these rules.

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In addition, these eligibility rules are not themselves segmentation-based models because they do not make predictions. Rather, they simply define conditions that must be met by policyholders in order to qualify for the insurance product that is being analyzed; for example, "*males between 25 and 65' with 'zero accident violations' and 'a car type is 2-door sports sedan or 4-door AWD SUV'*" (Apte, column 4, lines 12-14).

The effect of modifying the eligibility criteria can be to eliminate some segments from the computerized report generated by scenario analysis. In particular, segments could be eliminated because it might be logically impossible for policyholders to simultaneously belong to such segments and to also meet the (updated) eligibility criteria. For example, it is impossible to simultaneously be 18 and be "a male between 25 and 65." It is important to recognize, however, that segments are removed only from the scenario analysis report. They are not removed from the segmentation-based model itself that is provided as input to the report generation process.

Again, the only thing modified by Apte's scenario analysis process are product eligibility criteria, not segmentation-based models, and all such modifications are made by a human user, they are not generated automatically by a computer.

Because the method steps in Apte's scenario analysis neither produce nor modify segmentation-based models, none of these steps can be read against Appellant's claims because the latter requires the construction of a segmentation-based model and the steps in Apte's scenario analysis process fail this restriction.

SUMMARY OF DEFICIENCIES OF THE REJECTION **CURRENTLY OF RECORD**

Given the above Appellant's replies for the Examiner's response to arguments in the Examiner's Answer, Appellant hereinbelow summarizes the deficiencies of the rejection currently of record.

Relative to claim 19, the description at lines 17-27 of column 4 might reasonably be considered to "automatically generate a plurality of segments", this plurality of segments is a

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fixed set of segments resulting from applying the rules extracted during data mining. The description at lines 28-40 involves manual inputs from a user and, therefore, is not automatically generating segments.

Furthermore, the user-assisted process does not "generate" segments, as required by the plain meaning of the claim language. Rather, it is a process in which the user can selectively eliminate one of the segments, if the user decides that the segment is associated with an estimated pure premium that differs significantly from the actual premium.

Since no segment is generated in the user-assisted process, it goes without saying that a generated segment is evaluated to determine whether it satisfies a statistical constraint. Appellant further submits that "actual premium" is not a criterion used by actuaries to assess actuarial credibility and is, therefore, not a "statistical constraint".

Finally, contrary to the Examiner's characterization, as explained above in (E), the manual scenario analysis of Apte adjusts eligibility criteria but it does not generate a segmentation-based model.

Relative to claim 20, Appellant submits that "actual premium" is not an actuarial credibility constraint.

Relative to claims 1-18, Appellant submit that lines 2-5 of column 3 clearly demonstrate that a computer is executing portions of the computer tool described and that, therefore, a "program storage device readable by a machine, tangibly embodying a program of instructions" is inherently present in Apte. Therefore, there is no need to modify Apte to incorporate a "program storage device".

Relative to independent claim 1, the rejection has all the deficiencies identified above for claim 19. Simoudis does not overcome these deficiencies.

Relative to independent claim 2, the rejection has all the deficiencies identified above for claim 19. Simoudis does not overcome these deficiencies. Moreover, lines 28-39 of column 4 describes the user-assisted process in which segments are selectively eliminated. This is not a closed-loop process, let alone a closed-loop process to generate segments.

Relative to independent claim 3, the description at lines 33-40 of column 4 describes the user-assisted process in which segments from the fixed set of initial segments are

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selectively eliminated. There is no generation of alternate training data segments, since the segments are those of the original fixed segment set. Therefore, there is also no adjustment of any of the alternate pluralities to satisfy statistical constraints.

Relative to independent claim 4, the term "statistical likelihood scores" is a term of art, as described at lines 11-27 of page 97. The selective elimination of segments from the fixed initial set of segments has nothing whatsoever to do with either "statistical likelihood scores" or optimization of such scores, as alleged by the Examiner.

Relative to dependent claim 5, the term "what-if scenario analysis" of Apte conveys no hint whatsoever of the plain meaning of the language of this claim. The Examiner merely makes a conclusory declaration.

Relative to dependent claims 6, 9, and 10, the rejection contradicts the Examiner's earlier position that "statistical constraint" refers to "actual premium". The Examiner is understood as now applying this term to "prediction of pure premium".

Relative to dependent claims 7, 15, 17, and 18, Appellant submits that "actual premium" is not an actuarial credibility constraint.

Relative to dependent claim 8, the segments generated in Apte are clearly described at lines 23-27 of column 4 as being generated from the rules extracted from the data mining process. As such, there is no indication whatsoever that a threshold involved, let alone a threshold that is unique to each generated segment based on these rules.

Relative to dependent claims 11-13, the segments generated in Apte are clearly described at lines 23-27 of column 4 as being generated from the rules extracted from the data mining process. As such, this description clearly teaches against generating an alternate set of segments that includes splitting larger data segments into smaller data segments.

Relative to independent claim 14, the plain meaning of the claim language requires that a calculator generate alternate data segments. In lines 33-40 of column 4 of Apte, it is clearly the user that is executing the eliminating of segments from the original set of fixed segments. Thus, in these lines, there is neither a generation of segments nor a calculator that executes such generation.

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Relative to independent claim 16, the plain meaning of the claim language requires that the computer automatically generates alternative segments. Apte does not generate alternate segment sets, let alone generating them automatically.

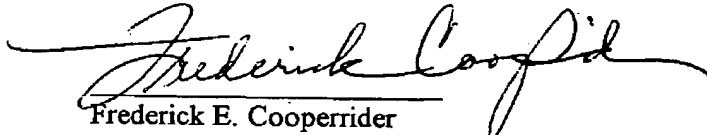
CONCLUSION

In view of the foregoing, Appellants submit that claims 1-20, all the claims presently pending in the application, are sufficiently enabled and are clearly and patentably distinct from the prior art of record and in condition for allowance. Thus, the Board is respectfully requested to remove all rejections of claims 1-20.

Please charge any deficiencies and/or credit any overpayments necessary to enter this paper to Assignee's Deposit Account number 50-0510.

Respectfully submitted,

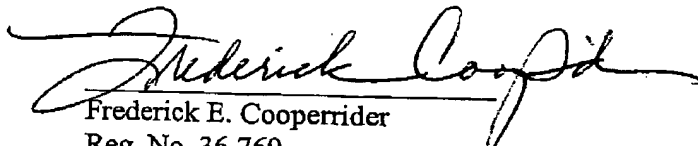
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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Appellant's Reply Brief on Appeal by facsimile with the United States Patent and Trademark Office addressed to Examiner Milan Kapadia, Group Art Unit 2143, and Examiner Joseph Thomas, Group Art Unit 3626 at fax number (703) 872-9306 this 29th day of September, 2004.


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